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Courtesy Copy of the Unamended Claims:

1. (previously presented) A method of scheduling data transmissions between a base station and a plurality of user terminal traffic streams in a wireless QoS network, comprising:  
transmitting a first poll from said base station to a first user terminal traffic stream in an active list of the user terminal traffic streams;  
transmitting at least one frame from a group of data frames from said first user terminal traffic stream to said base station in response to said first poll, wherein a queue state of said first user terminal traffic stream is indicated in said frame;  
removing said first user terminal traffic stream from said active list when said frame indicates that said queue state is empty;  
calculating a deferral window for said first user terminal traffic stream;  
scheduling transmissions of data frames between said base station and said plurality of user terminal traffic streams that remain on said active list; and  
returning said first user terminal traffic stream to said active list at the expiration of said deferral window.
2. (previously presented) The method of claim 1, wherein said deferral window is calculated using an algorithm based on the following equation:

$$T_D = \begin{cases} T_i, & L_i / \rho_i \geq T_{db} \\ T_r, & \text{otherwise} \end{cases}$$

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where  $T_i$  is an interval selected by a deferral window adaptation algorithm,  $T_{ob}$  is a requested delay bound,  $L_i$  is a nominal data frame size,  $\rho_i$  is a mean data transfer rate,  $T_s$  is a scheduling window, and  $T_D$  is the duration of said deferral window.

3. (original) The method of claim 2, wherein  $T_i$  is calculated using an algorithm based on the following equation:

$$T_i = T_s - (T_w - T_Q) + \sigma$$

where  $T_w$  is the average time between a first in line data frame arrival point in a user terminal traffic stream queue and the arrival of a first poll since a previous return of said user terminal traffic stream to said active list,  $T_Q$  is the average time between the return of said user terminal traffic stream to said active list and the scheduled transmission of a next poll, and  $\sigma$  is a heuristic factor based on the inter-arrival period variance of an uplink traffic stream.

4. (original) The method of claim 1, wherein said deferral window is calculated based on a defined inter-arrival period of a user terminal traffic stream.

5. (original) The method of claim 4, wherein said inter-arrival period corresponds to a period between voice or video data frames generated by a codec.

6. (canceled)

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7. (canceled)

8. (previously presented) A system of sending data transmissions comprising:  
 a plurality of user terminal traffic streams in an active list; and  
 a base station, wherein said base station is operable to:

transmit a first poll to a first user terminal traffic stream selected from said plurality of user terminal traffic streams;  
 receive at least one frame from a group of data frames from said first user terminal traffic stream in response to said first poll, wherein a queue state of said first user terminal traffic stream is indicated by said frame;  
 remove said first user terminal traffic stream from the active list when said frame indicates that said queue state is empty;  
 calculate a deferral window for said first user terminal traffic stream;  
 schedule transmissions of data frames between said base station and said plurality of user terminal traffic streams that remain on said active list; and  
 return said first user terminal traffic stream to said active list at the expiration of said deferral window.

9. (previously presented) The system of claim 8, wherein said deferral window is calculated using an algorithm based on the following equation:

$$T_D =$$

$$\begin{aligned} &L_i / \rho_i > T_{th} \\ &\text{otherwise} \end{aligned}$$

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where  $T_i$  is an interval selected by a deferral window adaptation algorithm,  $T_d$  is a requested delay bound,  $L$  is a nominal data frame size,  $\mu$  is a mean data transfer rate,  $T_s$  is a scheduling window, and  $T_p$  is the duration of said deferral window.

10. (originally) The system of claim 9, where  $T_i$  is calculated using an algorithm based on the following equation:

$$T_i = T_d - (T_w - T_o) + \sigma$$

where  $T_w$  is the average time between a first data frame arrival point in a user terminal traffic stream and the arrival of a first data frame in said traffic stream,  $T_o$  is the average time between the return of said user terminal traffic stream to said active list and the scheduling of transmission of a next poll, and  $\sigma$  is a heuristic factor based on the inter-arrival period variance of an uplink traffic stream.

11. (originally) The system of claim 8, where the duration of said deferral window is calculated based on a defined inter-arrival period of a user terminal traffic stream.

12. (originally) The system of claim 11, where the duration of said inter-arrival period corresponds to a period between voice or video data frames generated by a codec.

13. (canceled)

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14. (canceled)

15. (previously presented) A system of scheduling data transmissions comprising:  
 a plurality of user terminal traffic streams in an active list;  
 a base station;  
 means for transmitting a first poll from said base station to a first user terminal traffic

stream selected among said plurality of user terminal traffic streams;

means for transmitting at least one frame from a group of data frames from said first user terminal traffic stream to said base station in response to said first poll;

means for removing said first user terminal traffic stream from the active list when said frame indicates that said queue state is empty;

means for calculating a deferral window for said first user terminal traffic stream using an algorithm based on the following equation:

$$T_D = \begin{cases} T_i, & L_i / \rho_i \geq T_{db} \\ T_s, & \text{otherwise} \end{cases} \quad (1)$$

where  $T_i$  is an interval selected by a deferral window adaptation algorithm,  $T_{db}$  is a requested delay bound,  $L_i$  is a nominal data frame size,  $\rho_i$  is a mean data transfer rate,  $T_s$  is a scheduling window, and  $T_D$  is the duration of said deferral window;

means for scheduling transmissions of data frames between said base station and said plurality of user terminal traffic streams to remain on said active list; and

means for returning said first user terminal traffic stream to said active list at the expiration of said deferral window.

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16. (original) The system of claim 15, where  $T_i$  is calculated using an algorithm based on the following equation:

$T_i$  is calculated using an algorithm based on

$$T_i = (T_{tr} - T_{tr}) + \sigma$$

where  $T_{tr}$  is the average time between a first traffic stream of the and the arrival of a first traffic stream to said active list,  $T_e$  is the time between the return of said user terminal and the scheduled transmission of a next poll, and the selection heuristic factor is based on the inter-arrival

the data frame arrival point in the user terminal since a previous return of said user terminal the time between the return of said user terminal of transmission of a next poll, and  $\sigma$  is a variance of an uplink traffic stream.

17. (canceled)

18. (canceled)

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